

WHAT IS CLAIMED IS:

1 1. A polyvinylacetal-grafted polymer in the form of its aqueous
2 dispersion or water-redispersible powder, said polyvinylacetal-grafted polymer
3 comprising at least one base polymer prepared by emulsion or suspension
4 polymerization of at least one of vinyl ester monomer(s), (meth)acrylate
5 monomer(s), vinylaromatic monomer(s), olefin monomer(s), 1,3-diene monomer(s),
6 and vinyl halide monomer(s), and optionally, further monomers copolymerizable
7 therewith, said base polymer grafted with at least one polyvinylacetal polymer
8 comprising from 0 to 5.0 mol % of vinyl acetate units, from 75 to 95 mol % of
9 vinyl alcohol units and from 0.1 to 20 mol % of acetal units derived from aldehydes
10 having 3 to 7 C atoms.

1 2. The polyvinylacetal-grafted polymer of claim 1, wherein
2 monomers polymerized to form said base polymer include one or more of vinyl
3 acetate, vinyl esters of α -branched monocarboxylic acids having 9 to 11 C atoms,
4 vinyl chloride, ethylene, methyl acrylate, methyl methacrylate, ethyl acrylate, ethyl
5 methacrylate, propyl acrylate, propyl methacrylate, n-butyl acrylate, n-butyl
6 methacrylate, 2-ethylhexyl acrylate, and styrene.

1 3. The polyvinylacetal-grafted polymer of claim 1, wherein said
2 polyvinylacetal is a partially acetalated polyvinyl alcohol comprising from 80 to 90
3 mol % of vinyl alcohol units and from 10 to 20 mol % of acetal units derived from
4 aldehydes having 3 to 7 C atoms, or of mixtures of aldehydes having 3 to 7 C atoms
5 with acetaldehyde, said mixtures containing minimally 0.1 mol % of aldehydes
6 having 3 to 7 C atoms based on the polyvinylacetal.

1 4. The polyvinylacetal-grafted polymer of claim 3, wherein said
2 polyvinylacetal contains from 11 to 15 mol %, based on the polyvinylacetal, of
3 acetal units derived from 3 to 7 C atom-containing aldehydes.

1 5. A process for the preparation of polyvinylacetal-grafted
2 polymers in the form of their aqueous dispersions or water-redispersible powders,

3 comprising polymerizing by means of free radical emulsion or suspension
4 polymerization, in an aqueous medium, of one or more vinyl ester monomer(s),
5 (meth)acrylate monomer(s), vinylaromatic monomer(s), olefin monomer(s), 1,3-
6 diene monomer(s), or vinyl halide monomer(s), and optionally, further monomers
7 copolymerizable therewith, said polymerizing taking place in the presence of one
8 or more protective colloids a) and optionally, drying the polymer dispersion
9 obtained thereby in the presence of one or more protective colloids b), wherein said
10 polymerizing is carried out at a pH of from 5 to 8, and protective colloid(s) a)
11 comprise partially acetalated polyvinyl alcohols having from 0 to 5.0 mol % of
12 vinyl acetate units, from 75 to 99 mol % of vinyl alcohol units and from 0.1 to 20
13 mol % of acetal units derived from acetaldehyde having 3 to 7 C atoms, said
14 partially acetalated polyvinyl alcohols obtained by acetalating a parent polyvinyl
15 alcohol; wherein said parent polyvinyl alcohol has a viscosity of from 2 to 30
16 mPas, and wherein protective colloid(s) differing from a) are employed as
17 protective colloids b).

1 6. The process of claim 5, wherein the protective colloid(s) b)
2 include at least one of partially hydrolyzed polyvinyl alcohols;
3 polyvinylpyrrolidones; polysaccharides; cellulose(s) and their carboxymethyl,
4 methyl, hydroxyethyl and hydroxypropyl derivatives; proteins; soybean protein;
5 gelatin; ligninsulfonates; poly(meth)acrylic acid; copolymers of (meth)acrylates with
6 copolymerizable comonomer units bearing carboxyl functional groups;
7 poly(meth)acrylamide; polyvinylsulfonic acids and their water-soluble copolymers;
8 melamine formaldehyde sulfonates; naphthalene formaldehyde sulfonates; and
9 styrene/maleic acid and vinyl ether/maleic acid copolymers.

1 7. The process of claim 5, wherein the amount of protective
2 colloid a) is introduced initially in its entirety, or is partly introduced initially and
3 partly metered in during said polymerizing.

1 8. The process of claim 6, wherein the protective colloid b)
2 comprises a partially hydrolyzed polyvinyl alcohol having a degree of hydrolysis

- 3 of from 80 to 95 mol % and a Höppler viscosity, in 4% strength aqueous solution,
4 of from 1 to 30 mPa.s.

1 9. In construction adhesives, renders, filling compounds, floor
2 filling compounds, leveling compounds, sealing slurries, joint mortars and paints,
3 optionally comprising a hydraulically setting binder, wherein an aqueous polymer
4 dispersion or water-redispersible polymer powder is employed, the improvement
5 comprising selecting as at least one aqueous polymer dispersion or water-
6 redispersible polymer powder an aqueous polymer dispersion or water-redispersible
7 polymer powder of claim 1.

1 10. In construction adhesives, renders, filling compounds, floor
2 filling compounds, leveling compounds, sealing slurries, joint mortars and paints,
3 optionally comprising a hydraulically setting binder, wherein an aqueous polymer
4 dispersion or water-redispersible polymer powder is employed, the improvement
5 comprising selecting as at least one aqueous polymer dispersion or water-
6 redispersible polymer powder an aqueous polymer dispersion or water-redispersible
7 polymer powder of claim 2.

1 11. In construction adhesives, renders, filling compounds, floor
2 filling compounds, leveling compounds, sealing slurries, joint mortars and paints,
3 optionally comprising a hydraulically setting binder, wherein an aqueous polymer
4 dispersion or water-redispersible polymer powder is employed, the improvement
5 comprising selecting as at least one aqueous polymer dispersion or water-
6 redispersible polymer powder an aqueous polymer dispersion or water-redispersible
7 polymer powder of claim 3.

1 12. In construction adhesives, renders, filling compounds, floor
2 filling compounds, leveling compounds, sealing slurries, joint mortars and paints,
3 optionally comprising a hydraulically setting binder, wherein an aqueous polymer
4 dispersion or water-redispersible polymer powder is employed, the improvement
5 comprising selecting as at least one aqueous polymer dispersion or water-

6 redispersible polymer powder an aqueous polymer dispersion or water-redispersible
7 polymer powder of claim 4.

1 13. In a coating material, paint or adhesive wherein an aqueous
2 polymer dispersion or water-redispersible polymer powder is employed, the
3 improvement comprising selecting as at least one aqueous polymer dispersion or
4 water-redispersible polymer powder, an aqueous polymer dispersion or water-
5 redispersible polymer powder of claim 1.

1 14. In a coating material or binder for textiles or paper, wherein
2 an aqueous polymer dispersion or water-redispersible polymer powder is employed,
3 the improvement comprising selecting as at least one aqueous polymer dispersion
4 or water-redispersible polymer powder, an aqueous polymer dispersion or water-
5 redispersible polymer powder of claim 1.

1 15. In a tile cement or heat-insulating adhesive, wherein an
2 aqueous polymer dispersion or water-redispersible polymer powder is employed,
3 the improvement comprising selecting as at least one aqueous polymer dispersion
4 or water-redispersible polymer powder, an aqueous polymer dispersion or water-
5 redispersible polymer powder of claim 1.